

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A terminal ~~whose opportunity~~operable to access a communication medium ~~is controlled in accordance with a control frame issued from by a control station connected to a network,~~ the terminal comprising:

~~a control frame detection portion of detecting the control frame issued from the control station; a control frame memory portion of storing control information contained in the control frame; a substitute frame issuance determination portion of determining to issue a substitute frame when the control frame detection portion does not~~configured to detect the control frame, which is periodically transmitted from the control station, the control frame containing control information indicating a time period in which access to the communication medium is permitted;
and

an issuance portion configured to issue a frame containing the control information of the control frame, when the control frame is not detected over until a predetermined first time period, is elapsed; and

~~—— a substitute frame issuance portion of creating a frame which is the same as or equivalent to the control frame, as the substitute frame, based on the control information stored in the control frame memory portion when the substitute frame issuance determination portion determines to issue the substitute frame, and issuing the created substitute frame.~~

2. (Cancelled)

3. (Currently Amended) The terminal according to claim 1, wherein

when the detection portion detects, before a predetermined second time period elapses after the control~~substitute frame has been most recently received, issuance portion transmits a refusal response frame indicating that a request~~frame containing information representing a request for allocating a transmission band in which another terminal performs transmission to the control station,

the issuance portion issues a response frame containing information indicating that the request is rejected, which is transmitted from another terminal and should be responded to by the control station is refused, during issuance of the substitute frame periodically.

4. (Currently Amended) The terminal according to claim 1, wherein when the detection portion detects, before a predetermined second time period elapses after the control substitute frame has been most recently received, issuance portion does not respond to a request frame containing information representing a request for allocating a transmission band in which is transmitted from another terminal performs transmission and should be responded to by the control station, the issuance portion issues no response. during issuance of the substitute frame periodically.

5. (Currently Amended) The terminal according to claim 1, wherein the issuance portion periodically issues the frame containing the control information of the control frame, and
when the detection portion detects a frame, transmitted from the control station before a predetermined second time period elapses after the control frame has been most recently received, the issuance portion stops issuing the substitute frame during issuance of the substitute frame periodically, if receiving a frame from containing the control station information.

6. (Currently Amended) The terminal according to claim 1, ~~wherein the substitute frame issuance portion determines whether or not a frame is received from the control station until a predetermined second time period is elapsed, and further comprising:~~

~~a control station mode portion of causing~~configured to cause the terminal to operate as a ~~the control station when unless the substitute frame issuance~~detection portion ~~determines that a frame is not received from the control station until the receives the control frame from the control station, before a predetermined second time period is elapsed~~elapses after the control frame has been most recently received.

7. (Currently Amended) The terminal according to claim 6, wherein the control station mode portion collects information required for the terminal to operate as a control station from another terminal.

8. (Currently Amended) The terminal according to claim 6, wherein the ~~control station~~
~~mode~~issuance portion issues a reset signal to collect information required for the terminal to
operate as a control station from another terminal.

9. (Currently Amended) The terminal according to claim 1, ~~wherein,~~further
comprising:

a transmission portion configured ~~when the control frame is not detected until the first~~
~~time period is elapsed, the terminal tries to access the communication medium in accordance~~
with the control information contained in a previously received control frame, when the control
frame is not received.

10. (Currently Amended) The terminal according to claim 1, wherein
when the control frame is not detected over the predetermined first time period, the
issuance portion performs a competition with another terminal; and
~~the substitute frame issuance portion competes for a~~ when an access right to access the
communication medium is acquired as a result of before issuing the competition,~~substitute frame,~~
~~and when acquiring the access right, issues the substitute frame.~~ the issuance portion transmits
the frame containing the control information of the control frame.

11. (Currently Amended) The terminal according to claim 10, wherein
a candidate terminal which ~~issues~~ transmits the ~~substitute frame~~ containing the control
information of the control frame is previously designated and given a priority by the control
station,~~the candidate terminal is given a priority, and~~
the competition is performed such that a terminal having a higher priority has a higher
probability of acquiring the access right in the access right competition for issuance of access to
the substitute frame communication medium.

12. (Currently Amended) The terminal according to claim 1, wherein
a candidate terminal which ~~issues~~ transmits the ~~substitute frame~~ containing the control
information of the control frame is previously designated by the control station, and

~~the predetermined first time period used terminal further comprises a candidate terminal designation recognition portion of recognizing whether or not the control station designates the terminal as the candidate terminal, and when the candidate terminal designation recognition portion recognizes that when the terminal is designated as the candidate terminal, the substitute frame issuance determination portion determines whether or not to issue the substitute frame, assuming that a time period which is shorter than a the predetermined first time period used when the in a terminal which is not designated as the candidate terminal, is the first time period.~~

13. (Currently Amended) The terminal according to claim 12, wherein
the control station gives the candidate terminal is given a priority, and
a length of the substitute frame issuance determination portion uses a predetermined first time period is determined in accordance with having a length corresponding to the priority, to determine whether or not to issue the substitute frame.

14. (Currently Amended) The terminal according to claim 11, wherein the candidate terminal is designated by the control station designates the candidate terminal based on information about a communication state of a terminal in ~~the~~ a network.

15. (Currently Amended) The terminal according to claim 11, wherein
the designation of the terminal as the candidate terminal is released, in a situation that the
~~terminal is designated as a candidate terminal, when the control station designates another terminal as a~~ the candidate terminal, ~~the designation of the terminal as a candidate terminal is released.~~

16. (Currently Amended) The terminal according to claim 1, wherein an identifier for the control station is ~~described~~ contained in the control frame.

17. (Currently Amended) The terminal according to claim 16, wherein the terminal operates as the control station when the identifier for the terminal is ~~described~~ contained in the substitute frame containing the control information of the control frame.

18. (Currently Amended) A communication method executed ~~in by~~ a terminal whose ~~opportunity~~operable to access a communication medium is ~~controlled~~ in accordance with a control frame issued ~~from by~~ a control station, ~~connected to a network, at~~ the communication method comprising:

detecting the control frame ~~issued which is periodically transmitted~~ from the control station; ~~storing control information contained in the control frame~~ containing control information indicating a time period in which access to the communication medium is permitted; and;

issuing a frame containing the control information of the control frame, determining to ~~issue a substitute frame when the control frame is not detected until over a predetermined first time period, is elapsed; creating a frame which is the same as or equivalent to the control frame, as the substitute frame, based on the stored control information when it is determined to issue the substitute frame; and issuing the created substitute frame.~~

19. (New) An integrated circuit for use in a terminal operable to access a communication medium in accordance with a control frame issued by a control station, the integrated circuit comprising:

a detection portion configured to detect the control frame, which is periodically transmitted from the control station and received by a transmission and reception device of the terminal, the control frame containing control information indicating a time period in which access to the communication medium is permitted; and

an issuance portion configured to issue a frame containing the control information of the control frame, when the control frame is not detected over a predetermined first time period, and transmitting the frame to the transmission and reception device.

20. (New) A control method executed by an integrated circuit for use in a terminal operable to access a communication medium in accordance with a control frame issued by a control station, the control method comprising:

detecting the control frame, which is periodically transmitted from the control station and

received by a transmission and reception device of the terminal, the control frame containing control information indicating a time period in which access to the communication medium is permitted; and

issuing a frame, containing the control information of the control frame, when the control frame is not detected over a predetermined first time period, and transmitting the substitute frame to the transmission and reception device.

21. (New) The terminal according to claim 1, further comprising a control frame memory portion configured to store the control information contained in the control frame.